

# STATE OF COLORADO

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## Colorado Water Conservation Board

### Department of Natural Resources

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John W. Hickenlooper  
Governor

Mike King  
DNR Executive Director

Jennifer L. Gimbel  
CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E., Project Manager  
Kirk Russell, P.E., Chief  
Finance and Administration Section

DATE: March 8, 2013

SUBJECT: **Agenda Item 17b, March 19-20, 2013 Board Meeting**  
**Finance/Water Supply Planning– CWCB Loan and WSRA Applications**  
**Santa Maria Reservoir Company – Santa Maria Siphon & Canal System**  
**Rehabilitation**

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### Introduction

Santa Maria Reservoir Company (Company) is applying for a WSRA grant and CWCB loan to finance the Santa Maria Siphon and Canal System Rehabilitation Project (Project). The purpose of the Project is to make improvements to the siphon and conveyance system that delivers water from Continental Reservoir to Santa Maria Reservoir. The total Project cost is estimated to be \$1,855,000. In January of 2013, the Company was approved for a \$463,750 grant by the Rio Grande Basin Round Table from the Water Supply Reserve Account. The Company is requesting a loan from the CWCB to cover the remaining 75% of Project Costs. See attached Project Data Sheet for a location map and a Project summary.

### Staff Recommendation for WSRA Grant

Staff recommends approval of up to \$440,750 from the Statewide Account and \$23,000 from the Rio Grande Basin Account to the Santa Maria Reservoir Company to fund the Santa Maria Siphon and Canal System Rehabilitation Project.

### Staff Recommendation for Construction Fund Loan

Staff recommends the Board approve a loan, from the Construction Fund, not to exceed \$1,405,163 (\$1,391,250 for project costs and \$13,913 for the 1% Loan Service Fee) to the Santa Maria Reservoir Company for the Santa Maria Siphon and Canal System Rehabilitation Project. The loan terms shall be 30 years at the agricultural rate of 1.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

## **Background**

The Company provides irrigation water to approximately 70,000 acres in Rio Grande, Saguache, Conejos, and Alamosa Counties, in the San Luis Valley. The Company owns and operates two reservoirs: Santa Maria and Continental. The reservoirs are located about 20 miles southwest of the Town of Creede and are operated in conjunction with each other. Santa Maria receives regulated discharges from Continental through a century old conveyance system comprised of a pipeline, siphon and an open ditch.

Santa Maria was constructed in 1910 and has a design capacity of 43,500 acre-feet (AF). It stores irrigation water, Rio Grande compact water, San Luis Valley Water Conservancy District water, Colorado Division of Parks and Wildlife water, transmountain water, and provides flood control. Continental was also constructed in 1910 with a design capacity of 27,000 AF; however, due to seepage and spillway deterioration, for the past 20 years it has been limited by the State Engineer's Office (SEO) to a storage capacity of 15,000 AF.

The conveyance system between the reservoirs is also deteriorating. In order to continue to provide irrigation water to shareholders the Santa Maria siphon and Santa Maria canal both need to be repaired.

The siphon is 8,070 feet long, with a 7-foot diameter. It is made of welded steel plates and discharges water into a rock/concrete lined channel. The first 700 feet of the siphon is above ground and then continues below grade into the canal. The upstream portion of the siphon was constructed on glacial till which has been sliding, resulting in loss of support for the siphon.

The canal is approximately 7,200 feet long and is between three and eight feet deep with a bottom width varying from 20 to 25 feet wide. A 4-foot by 6-foot box culvert is located along the entire length of the canal at the right (looking downstream) inside toe of the canal. The box culvert is used for all winter flows. In summer, both the open channel and the box culvert are used.

In September of 2008, the Company was awarded \$191,700 in WSRA grants (\$50,000 from the Rio Grande Basin Account and \$141,700 from the Statewide Account) to conduct a Feasibility Study and final design plans and specifications of needed improvements including: Continental Reservoir, the conveyance system, and Santa Maria Reservoir. As a result of the work, the Company plans on improving its system in two phases. This Project will address the siphon and canal repairs.

## **Loan Feasibility Study**

The Loan Feasibility Study, titled "*Phase I – Santa Maria Rehabilitation Initiative*," dated January 30, 2013, was prepared by Ed Toms, P.E. of URS Corporation. The Study was prepared in accordance with CWCB guidelines and includes preliminary engineering and an engineer's estimate of probable cost that were used in determination of the total Project cost.

## **The Santa Maria Reservoir Company**

The Company is a Mutual Reservoir Company, incorporated in 1931. It is governed by a five-member board of directors. There are 225 shareholders with a total of 5,400 shares of stock. The board has the ability to take on debt and to withhold delivery of water to stockholders if assessments are unpaid. Shareholders must also approve annual assessments. If shareholders fail to set an assessment, the Board of Directors has the power to set assessments to provide for the maintenance and operation of the Company.

## Water Rights

The Company's decreed water rights include 37,524 AF of storage in Santa Maria Reservoir (1916 appropriation date), 64,240 AF of storage in Continental Reservoir (1934 appropriation date), and 275 cfs of direct flow rights from North Clear Creek, Bennett Creek, and Bolder Creek. On average the Company diverts 6,300 AF annually.

## Project Description

The objectives of this Project are to rehabilitate the main structural elements of the conveyance system between the reservoirs to avoid potential failure of the delivery system, to reduce maintenance issues for the Company, and to address water management inefficiencies.

*Siphon:* Several alternatives were considered to address the siphon including: 1) reducing land slide lateral pressure by removing the slide material and reconstructing the siphon in the slide section; 2) replacing the support system with a similar system and benching the slide area; and 3) rehabilitating and reinforcing the existing supports in place.

The Company chose alternative 3 to rehabilitate and reinforce the existing supports in place. This alternative includes: repairing the existing supports with reinforced concrete, and replacing the steel bearing plates that support the siphon.

*Canal:* Several alternatives were considered to improve the canal to match the capacity of the siphon. These alternatives included: 1) lining the canal with a 6-foot by 10-foot concrete box; 2) lining the canal with three 60-inch high-density polyethylene (HDPE) pipes; and 3) removing drop structures and adding concrete lining of the canal to improve the flow.

The Company chose alternative 3. It was decided that working within the existing footprint of the canal would minimize environmental and permitting issues and would be the most cost effective solution. In addition to removing drop structures and lining a portion of the canal, the rehabilitation will also include reshaping of the canal and the installation of a 42-inch bypass pipe within the existing box structure.

Final engineering documents have been prepared and used for estimating the total project cost summary as provided in Table 1.

**TABLE 1: TOTAL PROJECT COST SUMMARY**

Task	Cost
Santa Maria Siphon Support Repair	\$156,800
Santa Maria Canal Improvements	\$1,467,200
Construction Engineering Support	\$163,000
Admin and Legal	\$18,000
Environmental Permitting	\$50,000
Total	\$1,855,000

*Schedule:* The Project schedule is as follows: bid the project in June of 2013; construction in the summer/fall of 2013.

**TABLE 2: PROJECT FUNDING SUMMARY**

WSRA Grant	
Rio Grande River Basin	\$23,000
Statewide	<u>\$440,750</u>
TOTAL	\$463,750
CWCB Construction Fund Loan	\$1,391,250
Total Project Cost	\$1,855,000

CWCB will disburse funds at a rate of 75% loan to 25% grant of each invoice amount for Project related expenses, up to the approved grant and loan limits.

## Water Supply Reserve Account Grant

At the January 2013 Rio Grande Basin Roundtable meeting, the Roundtable granted approval of the Siphon Support System and Canal Improvements Project application request for \$23,000 in Basin Funds and recommended approval of \$440,750 of Statewide Funds. Letters of support for the Project were received from the Rio Grande Water Conservation District, the Rio Grande Water Users Association, the Monte Vista Water Users Association, the Colorado Potato Administrative Committee, the Rio Grande Canal Water Users Association, and the San Luis Valley Irrigation District.

**Source of Funds:** \$440,750 Statewide Funds, \$23,000 Rio Grande Basin Funds

**Matching Funds:** \$1,391,250 CWCB Loan

**Threshold and Evaluation Criteria:** The application articulates how the project satisfies the Threshold and Evaluation Criteria as summarized below:

Tier 1: Promoting Collaboration/Cooperation & Meeting Water Management Goals & Identified Needs:

This Project takes the first step in restoring full capacity to the conveyance system between two major reservoirs in the Rio Grande Basin. This Project benefits water users of the Rio Grande Canal and the Monte Vista Canal. This includes irrigators in a 70,000-acre agricultural area as well as local governments in three counties.

The original grant request was for a larger project to repair both the conveyance system and Continental Reservoir; however, given the high cost of the project, the work was split into two phases. When looking at both phases combined, there are additional benefits to the basin. Continental Reservoir has been used primarily to store irrigation water for agricultural producers spread throughout five counties of the San Luis Valley of Colorado. Continental also stores Colorado Division of Parks and Wildlife (CPW) water, Rio Grande Compact water, San Luis Valley Water Conservancy District water, and water for Groundwater Management Subdistrict #1. The CPW has water rights to three transmountain diversions that it hopes to be able to store, by mutual agreement, in Santa Maria to allow for beneficial use to wildlife, increasing habitat in critical winter range lands. This will allow for a productive fishery; sustained and increased riparian habitat; irrigation of lands for wildlife nesting, shelter and forage; and for well augmentation.

Tier 2: Facilitating Water Activity Implementation: The Company has committed to funding 75% of the Project costs through a CWCB loan.

Tier 3: The Water Activity Addresses Issues of Statewide Value and Maximizes Benefits: This Project directly improves the ability of Company shareholders to irrigate 70,000 acres of farm and ranch land in the San Luis Valley. It also increases the ability to release and manage Rio Grande Compact entitled waters by upgrading and making critical repairs to the conveyance system's siphon and canal, enabling future phases of the Project to move forward.

Discussion:

As identified in the SWSI findings, agricultural water users often lack the financial ability to adequately address infrastructure needs without financial aid. The Company does not possess the financial resources to make the improvements to efficiently and safely utilize its existing water rights without the loan and

grant funding. In addition, the SWSI Management Objectives, of the SWSI Phase II Report: Addressing the Water Supply Gap Technical Roundtable, includes the “sustainably meet agricultural demands,” which is directly met through this activity. The proposed Project effectively meets the objectives of HB 1177 and the consumptive needs of the Rio Grande Basin by rehabilitating existing infrastructure to preserve agricultural water use.

Reporting and Deliverables: All products, data and information developed as a result of this grant must be provided to CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform.

In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements provided below:

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.

## CWCB Loan Program

### Financial Analysis

The Company qualifies for the agricultural interest rate of 1.75% for a 30-year term. Table 3 provides a financial summary of the loan request.

**TABLE 3: LOAN FINANCIAL SUMMARY**

Total Project Cost	\$1,855,000
WSRA Grant Request	\$463,750
CWCB Loan Amount (75% of total Project cost)	\$1,391,250
CWCB Loan Amount (including 1% Service Fee)	\$1,405,163
CWCB Annual Loan Payment	\$60,604
CWCB Annual Loan Obligation (including reserve account)	\$66,665
Number of Shareholders	250
Number of Shares	5,400
Current Annual Assessment (per Share)	\$28
Annual Cost per share for loan repayment	\$12

### Creditworthiness:

The Company has no existing debt. It paid off a \$454,000 CWCB loan in 2003. The loan terms were 5% for a 20-year term. The Company deferred a payment in 1994 but ultimately paid off the loan early, making it a 13-year term.

In addition to assessment revenues, the Company also receives \$5,000 annually from a fishing club lease.

**TABLE 4: FINANCIAL RATIOS**

Financial Ratio	2009-2011	Future w/ Project
Operating Ratio (operating revenues/operating expenses) weak: <100% - average: 100% - 120% - strong: >120%	128% (strong) \$187K/\$146K	120% (average) \$254K/\$212K
Debt Service Coverage Ratio (total eligible revenues-operating expenses)/total debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A	162% (strong) (\$254K-\$146K)/\$66.7K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	285% (strong) \$416K/\$146K	196% (strong) \$416K/\$212K
Annual Operating Cost per Acre-Foot (based on 6,300 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$23.17 (weak) \$146K/6,300	\$33.65 (weak) \$212K/6,300

Collateral: As security for the loan, the Company will pledge assessment revenues backed by a rate covenant and annual financial reporting and the project itself including: the conveyance system including the open channel, the pipeline and the siphon. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Jay Yeager, Manager, Santa Maria Reservoir Company  
Susan Schneider, AGO  
Peter Johnson, AGO

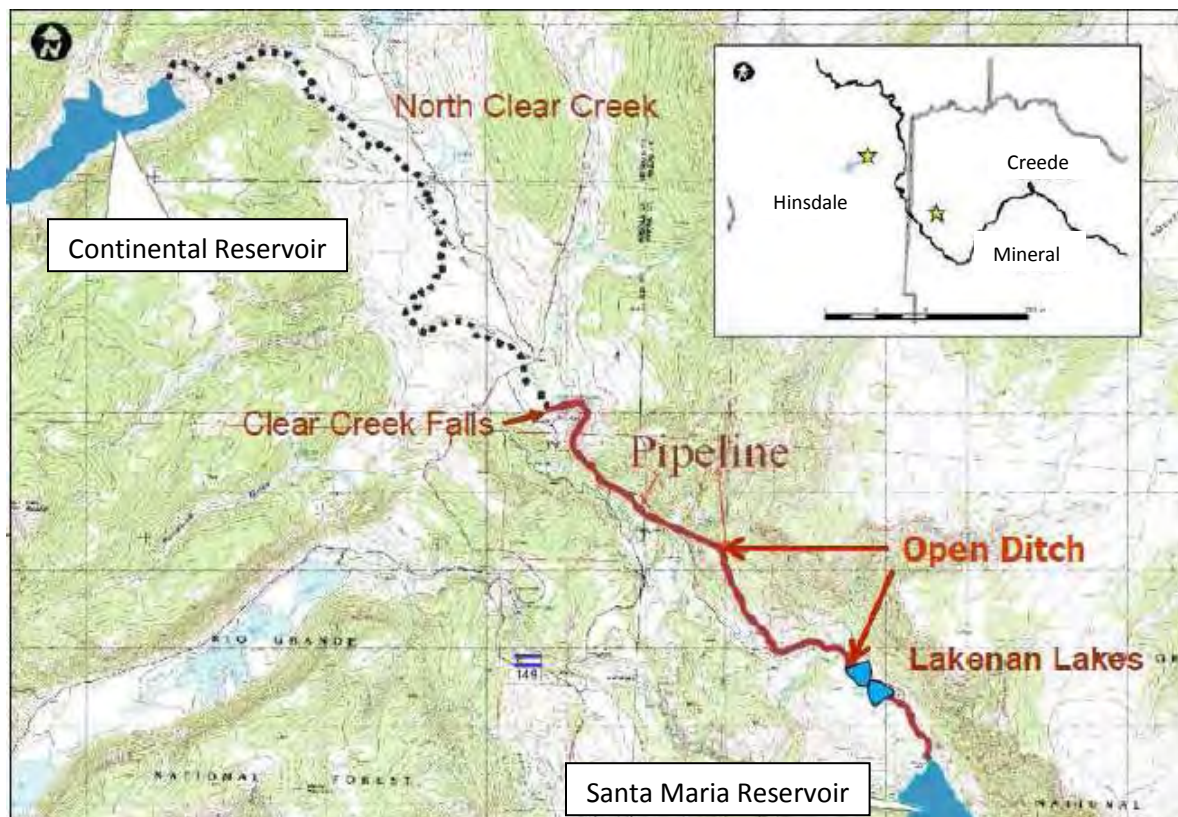
Attachment: Water Project Loan Program – Project Data Sheet



**Water Project Loan Program  
Project Data Sheet**

<b>Borrower:</b>	Santa Maria Reservoir Company	<b>County:</b>	Hinsdale & Mineral		
<b>Project Name:</b>	Santa Maria Siphon and Canal System Rehabilitation Project	<b>Project Type:</b>	Dam Rehabilitation & Ditch Rehabilitation		
<b>Drainage Basin:</b>	Rio Grande / District 20	<b>Water Source:</b>	North Clear Creek		
<b>Total Project Cost:</b>	\$1,855,000	<b>Funding Source:</b>	Construction Fund and Water Supply Reserve Account Grants		
<b>Type of Borrower:</b>	Agricultural	<b>Avg. Annual Diversion:</b>	6,300 AF		
<b>CWCB Loan:</b>	\$1,405,163 (w/ 1% service fee)	<b>Interest Rate:</b>	1.75%	<b>Term:</b>	30 years

Santa Maria Reservoir Company owns and operates Continental Reservoir (27,000 AF) and Santa Maria Reservoir (43,500 AF), located in the Rio Grande River Basin near Creede, Colorado. Santa Maria and Continental operate in conjunction with each other via a century old conveyance system made up of a pipeline, siphon, and open ditch. For the past 20 years, Continental has been under a storage restriction due to seepage issues, limiting the storage to 15,000 AF. The Company is planning a two phased approach to rehabilitate its system. The first phase (the subject of this funding request) is the rehabilitation of the conveyance system between the reservoirs including repairs to the siphon and lining of the canal. Construction is expected to occur in the summer/fall of 2013.



Rio Grande Inter-Basin Roundtable  
c/o San Luis Valley Water Conservancy District  
623 Fourth Street  
Alamosa, CO 81101  
Telephone: (719) 589 – 2230  
Email: slwcdco1@qwestoffice.net

January 17, 2013

Mr. Michael King, Executive Director  
Colorado Department of Natural Resources

Mr. Todd Doherty, Intrastate Water Management & Development  
Colorado Water Conservation Board

**Reference: Santa Maria Reservoir Siphon & Canal System Rehabilitation**

Gentlemen:

The Rio Grande Inter-Basin Roundtable (R.G.R.T) has determined that the single, most critical water issue confronting the Rio Grande Basin (Basin) is the current unsustainable management of surface and ground water. The R.G.R.T. has made the decision that water activities that address this issue be favorably considered for funding from the Water Supply Reserve Account, SB 2005 -179 (WSRA Funds), providing the proposed water activities meet the SWSI findings for the Basin and the CWCB & IBCC Criteria and Guidelines for funding.

The **Santa Maria Reservoir Siphon & Canal System Rehabilitation Project** (Project) is the initial phase of a larger rehabilitation of the Santa Maria and Continental Reservoirs. The overall rehabilitation is the result of a broad engineering and feasibility study that was partially funded by the WSRA some 5 years ago, and is a demonstration of how WSRA funds were envisioned to be made available for essentially scoping and project definition followed by subsequent on-the-ground projects. The rehabilitation has been divided into two phases to better accommodate funding and construction management.

Santa Maria Reservoir (Santa Maria) is located in the crater of an old volcano. The reservoir was constructed in 1910 and is operated in conjunction with Continental Reservoir by the Santa Maria Reservoir Company (SMR). Santa Maria receives regulated discharges from Continental Reservoir through a century-old conveyance system of a pipeline, a siphon and an open ditch. Grant funds will be used to upgrade this conveyance system by rehabilitating and stabilizing the siphon and implementing critical repairs to the canal. Ninety percent of the water managed by SMR goes through the Rio Grande Canal, serving some of the best water rights in the San Luis Valley. The remaining 10% goes through the Monte Vista Canal. SMR has 5,400 shares of outstanding stock, mostly split in groups of 10 shares, with 225 stockholders. A total of 70,000 acres are irrigated by this two-reservoir system.

The multiple benefits of implementing 1<sup>st</sup> phase of a multi-phase project are:

- Upgrading the conveyance system, with ultimate objective to remove State-imposed storage restrictions on Continental Reservoir.
- Restoring full operating efficiency to the conveyance system between Continental and Santa Maria reservoirs, thereby managing irrigation water more effectively.
- Improving control of current and future Rio Grande Compact water.
- Preventing further deterioration of water-control assets
- Reducing maintenance needs.
- Improving flood control capability and providing flexibility in responding to drought.
- Preparing the system to handle increased storage.
- Maximizing total capacity of pipeline and ditch when water is available for storage.
- Increasing options to serve third party water storage needs, such as the new Groundwater Management Subdistricts in the San Luis Valley.
- Maintaining favorable wildlife habitat conditions.
- Continuing to provide public and private recreational opportunities.

The Project meets the Threshold and Evaluation Criteria and addresses Tier 1, Tier 2 and Tier 3 of the WSRA Application.

The Request for WSRA funding is shown below, together with all sources of funding for the Project:

Total Project Cost	\$1,855,000	
WSRA Request (Total)	\$ 463,750	25% of the overall project
WSRA (basin)	\$ 23,000	5% basin match to statewide request
WSRA (statewide)	\$ 440,750	
CWCB Loan Request	\$1,391,250	75% of the total project cost
CWCB Loan w/ 1% service fee	\$1,405,163	

SMRC MATCHING AMOUNT

**\$139,125**

As can be seen, the SMR is making a major contribution to the cost of the Project of some 75%, with their stockholders unanimously supporting this significant loan commitment.

At the regular meeting of the Rio Grande Interbasin Roundtable on January 8, 2013, the Roundtable voted unanimously to recommend that the request for WSRA funds be sent to the CWCB for approval. The Roundtable approved \$23,000 be granted from the Basin Account and \$440,750 be granted from the Statewide Account.

The Project consists of two elements,

- Rehabilitation of Siphon Support System: A 7-foot diameter siphon takes water from North Clear Creek, after being released from Continental Reservoir, and discharges these flows into an open ditch and a concrete box conveyance or pipe structure. The siphon pipe is located on the side of a hill of talus material which continues to move. This has resulted in movement of the siphon support system, resulting in the possibility



of the 7-foot diameter pipe failing. Various alternatives were considered before electing to rehabilitate the support structures at a cost of \$172,000.

- Rehabilitation of the Canal and Open Ditch: Portions of the canal are open, with an associated concrete box structure which acts as a pipeline during cold weather months when the open ditch is subject to freezing. The rehabilitation of this system consists of reshaping the open canal and lining a portion of the canal with concrete to improve the hydraulics and hence the capacity. A 42-inch bypass pipe will be installed within the existing concrete box structure. This portion of the work essentially consists of earthwork, placement of concrete, and installation of 2,410 feet of bypass pipe. The total cost of this portion of the Project is some \$1,614,000. In addition, there are some incidental costs of \$68,000.

The funding of this WSRA request will enable SMR to achieve the 25% to 75% grant-to-loan funding formula from CWCB. Therefore, the R.G.R.T urges the CWCB to approve this request for funding of \$463,750 from the WSRA Rio Grande Basin and Statewide Accounts. This project provides multiple benefits to local stakeholders and achieves significant improvements in Colorado's efficient management of Compact-entitled waters.

The R.G.R.T. appreciates the support of the Department of Natural Resources, the Colorado Water Conservation Board and the Interbasin Compact Commission in assisting in meeting the needs of all users of Colorado's water and in fostering intrabasin and interbasin communications and discussions. We believe that the above project will assist in this effort.

Sincerely,



Mike Gibson  
Chair, Rio Grande Interbasin Roundtable

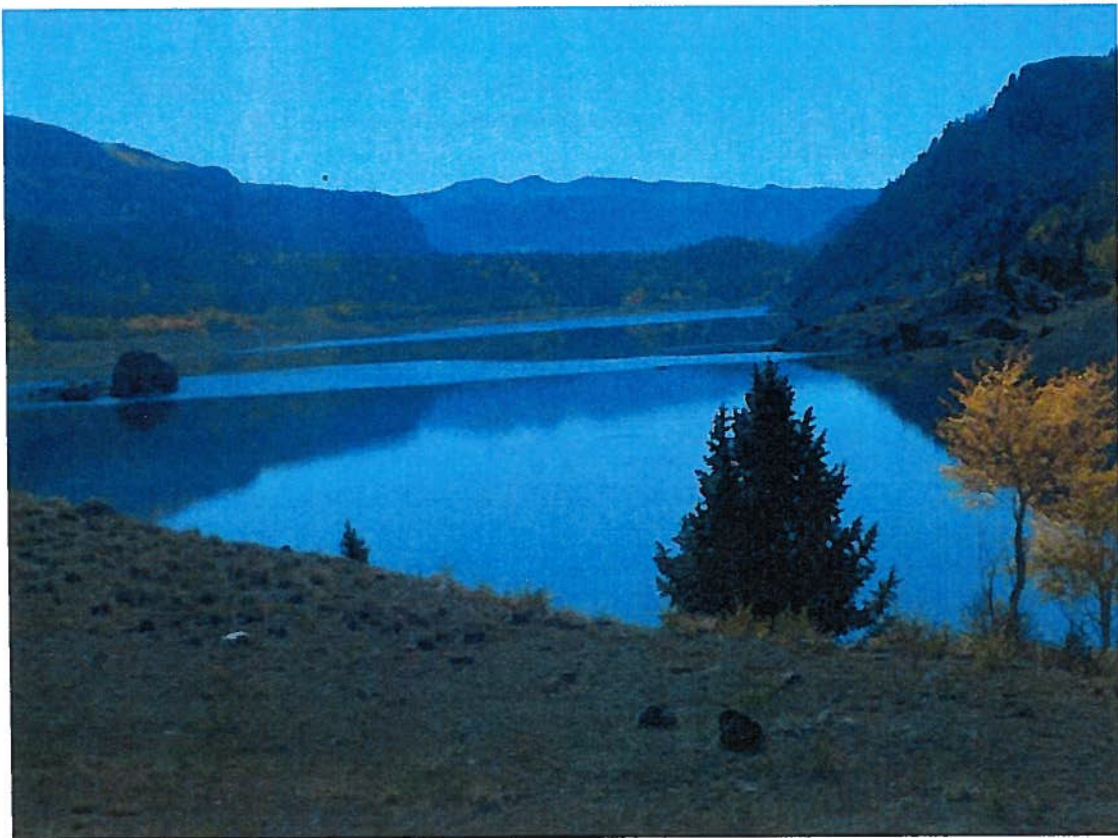
Attachment (1)

cc: Santa Maria Reservoir Company



# **Santa Maria Reservoir Siphon & Canal System Rehabilitation**

**RIO GRANDE BASIN ROUNDTABLE**



**Water Supply Reserve Account**

**Grant Application**

**January 8, 2013**



**COLORADO WATER CONSERVATION BOARD**  
**WATER SUPPLY RESERVE ACCOUNT**  
**APPLICATION FORM**



**SANTA MARIA RESERVOIR SIPHON & CANAL SYSTEM REHABILITATION**

**Name of Water Activity/Project**

**SANTA MARIA RESERVOIR COMPANY**

**Name of Applicant**

**RIO GRANDE BASIN ROUNDTABLE**

**Amount from Statewide Account:**

**\$440,750.00**

**Amount from Basin Account(s):**

**23,000.00**

**Total WSRA Funds Requested:**

**463,750.00**

**Approving Basin Roundtable(s)**

*(If multiple basins specify amounts in parentheses.)*

**Application Content**

Application Instructions	page 2
Part I – Description of the Applicant	page 3
Part II – Description of the Water Activity	page 5
Part III – Threshold and Evaluation Criteria	page 8
Part IV – Required Supporting Material	
Water Rights, Availability, and Sustainability	page 15
Related Studies	page 17
Signature Page	page 21

**Required Exhibits**

- A. Statement of Work, Budget, and Schedule
- B. Technical Specifications – Canal and Siphon Stabilization - Maps
- C. Photos – Letters of Recommendation

**Appendices – Reference Material**

- 1. Program Information
- 2. Insurance Requirements
- 3. WSRA Standard Contract Information (Required for Projects Over \$100,000)
- 4. W-9 Form (Required for All Projects Prior to Contracting)

## Water Supply Reserve Account – Application Form

Revised December 2011

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### **Instructions**

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCB). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCB staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCB website at: <http://cwcb.state.co.us> Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf>

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Greg Johnson – WSRA Application  
Colorado Water Conservation Board  
1580 Logan Street, Suite 200  
Denver, CO 80203  
[gregory.johnson@state.co.us](mailto:gregory.johnson@state.co.us)

If you have questions or need additional assistance, please contact Greg Johnson at: 303-866-3441 x3249 or [gregory.johnson@state.co.us](mailto:gregory.johnson@state.co.us).



**Water Supply Reserve Account – Application Form**  
Revised December 2011

**Part I. - Description of the Applicant (Project Sponsor or Owner);**

1.	Applicant Name(s):	Santa Maria Reservoir Company		
	Mailing address:	P.O. Box 288 Monte Vista, CO 81144		
	Taxpayer ID#:	84-0418055		
	Primary Contact:	Jay Yeager	Position/Title:	Manager
	Email:	rgcjey@gmail.com		
	Phone Numbers:	Cell: 719-850-1111	Office:	719-852-3556
	Alternate Contact:	Connie Pleasant	Position/Title:	Admin. Assistant/Sec.
	Email:	pleasant@gojade.org		
	Phone Numbers:	Cell:	Office:	719-852-3556

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

- ☐ Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
- ☒ Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.
- ☐ Private Incorporated – mutual ditch companies, homeowners associations, corporations.
- ☐ Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
- ☐ Non-governmental organizations – broadly defined as any organization that is not part of the government.

**Water Supply Reserve Account – Application Form**  
Revised December 2011

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3. Provide a brief description of your organization

**Santa Maria Reservoir Company (SMRC) is an eligible applicant under Senate Bill 06-179. It was incorporated in 1931, "to safeguard and protect the rights of all water users and consumers of water in what is commonly known as The Continental Reservoir (Continental), located in Hinsdale County, Colorado, and storing water for use in connection with The Rio Grande Canal and the Monte Vista Canal, supplying water for irrigation in the Counties of Rio Grande, Saguache, Conejos and Alamosa, in the State of Colorado, all in Water District numbers 20, 21, 22, 26, and 27 in Irrigation Division No. 3 of the State of Colorado;" and "For the purpose of acquiring title, holding, maintaining and operating the Santa Maria Reservoir, the storage of water therein, the distribution of water therefrom, together with all extensions thereof or thereto, the inlet works, outlet works, settling ponds and maintaining the same..."**

**Santa Maria Reservoir (Santa Maria) is located in the crater of an old volcano. The reservoir was constructed in 1910 and is operated in conjunction with Continental. Santa Maria receives regulated discharges from Continental Reservoir through a century-old conveyance system (the System) of a pipeline, a siphon and an open ditch (See Attachment A).**

**Ninety percent of the water managed by SMR goes through the Rio Grande Canal, serving some of the best water rights in the San Luis Valley. The remaining 10% goes through the Monte Vista Canal.**

**SMR has 5,400 shares of outstanding stock, mostly split in groups of 10 shares, with 225 stockholders. A total of 70,000 acres are irrigated by this two-reservoir system.**

4. If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.
5. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.

☒ The Applicant will be able to contract with the CWCB using the Standard Contract

☐ The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant. **None apply**

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**Part II. - Description of the Water Activity/Project**

1. What is the primary purpose of this grant application? (Please check only one)

☐ Nonconsumptive (Environmental or Recreational)

☒ Agricultural

☐ Municipal/Industrial

☐ Needs Assessment

☐ Education

☐ Other      Explain:

2. If you feel this project addresses multiple purposes please explain.

- Implementing 1<sup>st</sup> phase of a multi-phase project by upgrading the conveyance system, with ultimate objective to remove State-imposed storage restrictions on Continental Reservoir
- Restoring full operating efficiency to the conveyance system between Continental and Santa Maria reservoirs, thereby managing irrigation water more effectively
- Improving control of current and future Rio Grande Compact water
- Preventing further deterioration of water-control assets and reducing maintenance needs
- Improving flood control capability and providing flexibility in responding to drought
- Upgrading conveyance system to handle increased storage of depletion water
- Maximizing total capacity of ditch and pipeline when water is available for storage
- Increasing options to serve third party water storage needs
- Maintaining favorable wildlife habitat conditions.
- Continue to provide public and private recreational opportunities.

## Water Supply Reserve Account – Application Form

Revised December 2011

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

☐

Study

☒

X

Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

New Storage Created (acre-feet)

New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)

Existing Storage Preserved or Enhanced (acre-feet)

Length of Stream Restored or Protected (linear feet)

690' pipe  
7,200' canal

Length of Pipe/Canal Built or Improved (linear feet)

Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)

Area of Restored or Preserved Habitat (acres)

Other -- Explain:

4. To help us map WSRA projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude:

37,845139

Longitude:

107,147641

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

(next page)

**The objective of the Santa Maria Reservoir Siphon & Canal System Rehabilitation Project (this Project) is to improve the capability of SMRC to continue providing irrigation water to shareholders. This will be accomplished by rehabilitating and making critical repairs to the Santa Maria Siphon and the Santa Maria Canal, which constitute the main structural elements of the conveyance system between Continental Reservoir and Santa Maria Reservoir. The goals of this Project are to mitigate current water-management inefficiencies, reduce high maintenance, and prevent continued deterioration and potential failure of this delivery system.**

**This Project constitutes the first phase of SMRC's multi-phase Santa Maria Rehabilitation Initiative (referred to here as the SMRC Rehab Initiative), implementing recommendations made in recently completed studies by URS Corporation (URS). This Project and all future phases of the SMRC Rehab Initiative have the eventual objective of lifting the State-imposed storage limitation at Continental Reservoir and mitigating or eliminating the many problems created by the deterioration of a century-old system which will otherwise soon reach the end of its useful life.**

**WSRA grant funding requested represents 25% of total project cost, with the remaining costs funded through a CWCB Water Projects Loan and matching funds from SMRC. All funds will be used to rehabilitate and reinforce the existing supports of the siphon and to improve the flow hydraulics of the conveyance system by upgrading and improving the canal. The preferred alternative for the canal requires removing the existing drop structures and upgrading and adding to the canal's concrete lining, thus enabling the system to convey additional flow when available.**

**This Project, the first phase of the SMRC Rehab Initiative, will improve and increase the capacity of the conveyance system between Continental Reservoir and Santa Maria Reservoir and put in place the critical elements required to proceed with future improvements at Continental Reservoir. By implementing the preferred alternatives in the URS Studies, this Project will accomplish multiple consumptive and nonconsumptive purposes; greatly improve SMR's ability to meet the agricultural needs of irrigators in 70,000 acres of the San Luis Valley; and improve the efficient management of Colorado's Rio Grande Compact water.**

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### Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)
  - a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.<sup>1</sup>

**This water activity is consistent with Section 37-75-102 because it implements the recommendations of previous studies relating to the deterioration of existing structural elements in the conveyance system between two existing reservoirs. This project does not supersede, abrogate, or otherwise impair Colorado's current system of allocating water, nor does it in any way pertain to or affect Colorado's water rights adjudication system, nor does it restrict the ability of any holder of a water right to use or dispose of that water right in any manner permitted under Colorado law. This project in no way diminishes, impairs, or causes injury to any property or contractual right and it actually protects and enhances the value of water rights held by stockholders of the Santa Maria Reservoir Company by improving and preserving the physical structures which are critical elements of their water storage and distribution system.**

- b) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRT's evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

**This is affirmed in the cover letter from the Chairman of the Rio Grande Basin Roundtable.**

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<sup>1</sup> 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.



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- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.<sup>2</sup> The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

**This water activity meets the provisions of Section 37-75-104(2) because it directly addresses issues of sustainability, which are of the highest priority to the Rio Grande Basin Roundtable. As the first Phase of the SMRC Rehab Initiative, this Project supports an important goal of the Statewide Water Supply Initiative (SWSI) which is to increase the ability for this basin to meet current and future consumptive and nonconsumptive needs. This Project is the first step to eventually removing the State-imposed storage limits of Continental reservoir. By upgrading the conveyance system between Continental and Santa Maria reservoirs, this Project helps to meet the Rio Grande Basin's increasing demands for water currently and for decades into the future.**

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<sup>2</sup> 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

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- d) **Matching Requirement:** For requests from the Statewide Fund, the applicants is required to demonstrate a **20 percent** (or greater) match of the request from the Statewide Account. Statewide requests must also include a minimum match of **5 percent** of the total grant amount from Basin Funds. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCB. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in Exhibit A of this application)

Total Project Cost	\$1,855,000	
WSRA Request (Total)	\$ 463,750	25% of the overall project
WSRA (basin)	\$ 23,000	5% basin match to statewide request
WSRA (statewide)	\$ 440,750	
CWCB Loan Request	\$1,391,250	75% of the total project cost
CWCB Loan w/ 1% service fee	\$1,405,163	

**SMRC MATCHING AMOUNT**

**\$139,125**

2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

**Evaluation Criteria** – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three “tiers” or categories. Each “tier” is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.



**Tier 1: Promoting Collaboration/Cooperation and Meeting Water Management Goals and Identified Water Needs**

- a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).

**Consumptive & Nonconsumptive Needs:** As the Rio Grande Basin's confined and unconfined aquifers fall to the lowest levels on record, and as drought conditions worsen, this Project takes the first step in restoring full capacity to the conveyance system between two major reservoirs. By implementing the recommendations of previous studies, this Project promotes the sustainability priorities of the Rio Grande Basin Roundtable, supports the storage needs of subdivisions as they come online, and extends the useful life of SMRC's conveyance system from the Diversion Gate through the Open Ditch to Santa Maria Reservoir -- for perhaps another century.

**Multiple Interests:** This Phase I implementation project is of high value to many stakeholders vested in the continued reliable delivery of water through the Rio Grande Canal and the Monte Vista Canal. This includes irrigators in a 70,000-acre agricultural area as well as local governments in three counties. Letters of support demonstrate the high level of consumptive and nonconsumptive value of this project and the importance of its successful completion.

Many diverse interests of the Rio Grande Basin and of Colorado are served by the Continental and Santa Maria reservoirs. This Project's purpose is to upgrade and make critical repairs to the conveyance system connecting these two reservoirs. Continental Reservoir has been used primarily to store irrigation water for agricultural producers spread throughout five counties of the San Luis Valley of Colorado. Continental also stores CDOW water, Rio Grande Compact water, San Luis Valley Water Conservancy District water, and water for Subdistrict #1.

Continental also provides storage for other entities as needed. For example, CDOW is currently using the Rio Grande Reservoir to assist in reaching its water use goals and objectives. Through this Project, SMRC will enhance its ability to further assist the CDOW in achieving these goals. The CDOW has water rights to 3 Transmountain diversions. As the SMRC Rehab Initiative continues, the CDOW, by mutual agreement, will be able to store enough water in Santa Maria to allow for an effective and well-thought-out plan for the most beneficial use to wildlife, increasing habitat in critical winter range lands. This will allow for a productive fishery; sustain and increase riparian habitat; irrigate lands for wildlife nesting, shelter and forage; and provide increased storage for well augmentation.

Fixing and upgrading the siphon and canal provide SMRC renewed levels of operational flexibility and cost effectiveness, reducing maintenance and allowing more resources to be devoted to recreation. As an example, CDOW may be able to fully utilize the ability to store more water by offering it as potential payment for projects to private landowners in return for walk-in access on their lands for hunting and or fishing.

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**Multiple Basins / Statewide Interests:** This Project's Phase I upgrades to the siphon and the canal are essential in order for SMRC to proceed with work at Continental Reservoir and the eventual lifting of the State-imposed storage restriction at Continental. With this restored capacity, CDOW will be in a better position to answer water demands in the face of uncontrollable circumstances, such as now face this Basin due to drought. Restored storage capacity provides flexibility in how and when water is distributed to different areas, depending on needs and available resources.

- b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.

**Cooperation and Collaboration:** Some examples of inter-agency collaboration are described in (a) above. Multiple benefits of this Project include providing water for irrigation and for wildlife, maintaining flood control, providing flexibility in addressing drought conditions, and offering spectacular opportunities for high altitude recreational fishing and boating.

If the century-old delivery system is not rehabilitated it will continue to deteriorate, potentially putting Santa Maria Reservoir out of commission and presenting huge problems to SMRC in storing and delivering water.

As the Rio Grande Basin develops subdistricts, the availability of storage for well augmentation and stream depletions becomes a priority. In addition to agricultural water management this is of concern to many of the CDOW state wildlife areas (SWA), which rely on wells in order to maintain wildlife habitat. CDOW currently has surface water rights and wells with a variety of use adjudications on SWA's.

The establishment of groundwater conservation sub-districts within the SLV may have an effect on the amount of water pumped by any individual well on a SWA, regardless of CDOW's active participation in the district. Should a SWA fall within areas which are not regulated by a sub-district, the State Engineer may dictate a set of rules and regulations. Therefore, Transmountain water which is collected and stored in these reservoirs may serve to augment wells which cannot be re-adjudicated for the beneficial use of wildlife or which may be reduced in flow as a result of a sub-district or to comply with State Engineer rules and regulations.

- c. The water activity helps implement projects and processes identified as helping meet Colorado's future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable's basin-wide water needs assessment.

This Project supports the Rio Grande Basin's work to improve the management of surface and ground water supplies by ameliorating or curing problems created by the deterioration and potential failure of SMRC's conveyance system linking Continental and Santa Maria reservoirs.

**This water activity greatly improves water management efficiency; promotes increased future storage and distribution capabilities of two reservoirs; and provides SMRC greater flexibility to provide additional storage to third parties. This Project is critically important, helping in many ways to meet the water supply challenges of the Rio Grande Basin, which is totally over-appropriated.**

**As the first step in restoring the designed storage capacity at Continental, this Project suggests another major benefit to Colorado. Lifting the storage limitation at Continental will enable SMRC to release Transmountain water throughout the year, thus maintaining a ‘low flow’ in the Rio Grande and its tributaries. This flow would promote the maintenance of fish populations and recreational activities, assisting in the efficient delivery of water. Currently, the CDOW is researching the amount of water needed to maintain a low flow in the Rio Grande. In all these ways, this Project effectively addresses the Statewide Water Supply Initiative’s Management Objectives and the Rio Grande Basin Roundtable’s concerns regarding sustainability, and improved management of surface and ground water resources. This Project restores the conveyance system between Santa Maria and Continental Reservoirs, returning these assets to optimal operational reliability, and, in the process, complying with all applicable laws and regulations of the State of Colorado.**

**A fully functioning conveyance system is essential to lifting the State-imposed storage restriction on Continental Reservoir. It restores full operating efficiency of the conveyance system and greatly enhances SMRC’s ability to hold and control additional project water, transmountain water, augmentation water, and Rio Grande Compact water. This Project anticipates future consumptive and nonconsumptive needs of the San Luis Valley by upgrading and preserving SMRC’s ability to respond to drought, providing storage for subdistrict replacement water, maximizing the total capacity of the ditch and the pipeline when water is available for storage, and improving SMRC’s ability to respond to changeable and unpredictable circumstances over the coming decades.**

**Tier 2: Facilitating Water Activity Implementation**

- d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).**

**Receiving grant funds from the WSRA Account is critical for this water activity to be implemented. SMRC has negotiated with CWCB to obtain a ratio of grant funds to loan funds of 25% to 75%. This represents a sizeable commitment from the Board and Stockholders of SMRC. That loan cannot be obtained without first being awarded the grant funds requested in this proposal.**

**The Loan Feasibility Document, prepared by the Project’s design engineer, Mr. Ed Toms of URS Corporation, describes this grant/loan strategy as follows:**

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*"Total capital expenses for the recommended project alternative, including construction and construction contingency, construction engineering, SMRC's administration and legal support, and environmental permitting support is \$1,855,000. SMRC is anticipating receiving 25% funding support from the Basin and Statewide grants from the Water Supply Reserve Account (WSRA). This support would reduce the project cost to \$1,391,250. SMRC is applying for 90% of the construction cost through the CWCB Small Project Loan Program and will finance the remaining 10% of the construction cost through member participation. SMRC's loan request, with the CWCB 1% Service Fee, is for the amount of \$1,252,125. The annual payment will be \$55,543.88, assuming a 30-year loan at an interest rate of 1.75%. Table ES-1 presents a summary of the requested project loan."*

**Table ES.1**  
**Project Loan Summary\***

Total Project Cost (Rounded)	\$1,855,000
Total Project Amount after Anticipated Grant (25%)	\$1,391,250
Total Amount Eligible for CWCB Funding (90%) <i>100%</i>	<del>\$1,252,125</del>
1% CWCB Loan Service Fee	<del>\$12,521.25</del>
CWCB Loan (Including 1% Service Fee)	<del>\$1,264,646.25</del>
CWCB Annual Loan Payment	<del>\$55,543.88</del>
Number of Shares	5,400
Annual Cost Per Share for Loan	<del>\$10.10</del>
Current Assessment per Share	\$28.00
New Assessment per Share	<del>\$38.10</del>

*\*Also see loan feasibility study*

*\$1,391,250*  
*\$13,913*  
*\$1,405,163*  
*\$60,604*  
*\$12*

*Edited to be consistent w/ loan request. acm 2/28/13*

- e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

As explained in 1(3)d above, applicant is providing matching funds of \$139,125, in addition to taking on the above loan. This represents a significant and appropriate commitment to the project by shareholders.

**Tier 3: The Water Activity Addresses Other Issues of Statewide Value and Maximizes Benefits**

- f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.

This Project directly improves the ability of SMRC to irrigate 70,000 acres of farm and ranch land in the San Luis Valley. Full discussion and details are above, in Tier 1a and Tier 1b.



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- g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.

**This Project greatly increases SMRC's ability to store, release, and manage Rio Grande Compact entitled waters by upgrading and making critical repairs to the conveyance system's siphon and canal, enabling future phases of the SMRC Rehab Initiative to move forward. Details and a full discussion of this element of the Project are above, in Tier 1a and Tier 1b.**

- h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.
- i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.

**Findings from the URS Hydrology studies have provided a more thorough understanding of the complexities involved in restoring full capacity to Continental and Santa Maria reservoirs. Recognizing this, SMRC increased its financial commitment by expanding those studies (2011 WSRA grant), and its stockholders have recently approved the 25% / 75% grant/loan strategy. This sustained re-commitment of funds by SMRC, plus the funds requested here, provides a high level of benefit to Colorado in relation to the grant funds requested, for all the reasons listed above, but primarily by improving Colorado's ability to meet its commitments to the Rio Grande Compact. This application requests funds for the first of several steps in restoring full capacity to Continental and Santa Maria reservoirs. That represents a very good deal for Colorado.**

- j. The water activity is complimentary to or assists in the implementation of other CWCB programs.

**CWCB has twice funded the studies by URS Corporation which were required in order for SMRC to proceed with this implementation project. Other CWCB programs to upgrade or improve reservoirs in the Rio Grande Basin have provided WSRA funding for the Rio Grande Reservoir, Terrace Reservoir Spillway Replacement, Sanchez Reservoir, and several grants for Platoro Reservoir. This Project is in keeping with CWCB's objective to upgrade deteriorated and aging reservoirs in the San Luis Valley.**

### **Part IV. – Required Supporting Material**

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

**Santa Maria stores irrigation water and also stores Subdistrict #1 water, Rio Grande Compact water, San Luis Valley Water Conservancy District water, Colorado Division of Wildlife (CDOW) water, and Trans-Mountain water. Santa Maria also provides flood control. Continental, with a**

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designed capacity of 27,000 acre feet, and Santa Maria, with designed capacity 43,500 acre feet, irrigate a vast 5-county area of the San Luis Valley. For the past twenty years, however, Continental has been limited to storing only 15,000 AF due to the deteriorating condition and the leaks, seeps and losses in the dam and the deteriorated condition of the conveyance system between Continental and Santa Maria reservoirs.

Ninety percent of the water managed by SMR goes through the Rio Grande Canal. The remaining 10% of SMRC water goes through the Monte Vista Canal. SMR has 5,400 shares of outstanding stock, mostly split in groups of 10 shares, with 225 stockholders. A total of 70,000 acres are irrigated by this two-reservoir system.

This project will not broaden SMRC's service area and will not provide for irrigation of any new lands. The present lands irrigated are 70,000 acres, as mentioned above. No new downstream stream depletions will occur due to the proposed Project elements. No additional water supplies will be developed in connection with this Project. No new or increased diversions will be made and no additional storage capacity will be created at the reservoir in this Project, although removal of the State-imposed limitation on storage at Continental is an overall objective of the SMRC Rehab Initiative, of which this Project is the first phase.

SMRC has the water rights in place for this Project, with no new rights required. As set forth in the Loan Feasibility Study, Table 3.1, excerpted below, is a summary of SMRC's storage water rights and Table 3.2 presents their diversion rights from North Clear Creek, Bennett Creek, and Boulder Creek, all of which are stored by the Santa Maria Reservoir.

(next page)

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<b>Table 3.1 - Summary of Storage Water Rights</b>			
<b>Appropriation No.</b>	<b>Adjudication Date</b>	<b>Appropriation Date</b>	<b>Amount (ac-ft)</b>
<b>Santa Maria Reservoir</b>			
1916-81A 1916-2 (Reservoir)	September 13, 1916 <sup>1</sup>	August 11, 1986	15,871.21
1916-81A 1916-4 (Reservoir)	September 13, 1916 <sup>1</sup>	September 22, 1902	21,643.79 <sup>2</sup>
Total Storage Right Santa Maria Reservoir			37,515.00
<b>Continental Reservoir</b>			
1934-1	December 15, 1934	June 1, 1901	8,832
1934-3	December 15, 1934	May 4, 1907	2,557
1934-4	December 15, 1934	May 4, 1907	15,327 <sup>3</sup>
Total Storage Right Continental Reservoir			26,716
<b>Total System Storage Right</b>			<b>64,231</b>
<sup>1</sup> - Original decree amended on remitter June 26, 1924.			
<sup>2</sup> - Originally 27,945.85 ac-ft; 6,302.06 ac-ft conditional not made absolute.			
<sup>3</sup> - Originally 19,361 ac-ft; 4,034 ac-ft conditional not made absolute.			

<b>Table 3.2 - Summary of Diversion Water Rights</b>	
<b>Diversion Point</b>	<b>Amount (cfs)</b>
Santa Maria Supply Ditch – North Clear Creek	150
Santa Maria Supply Ditch – Bennett Creek	25
Santa Maria Supply Ditch – Boulder Creek	100
<b>Total</b>	<b>275</b>

2. Please provide a brief narrative of any related studies or permitting issues.
- **A Loan Feasibility Study has been prepared in parallel with this proposal by URS Corporation, in conformance with CWCB's grant/loan requirements. The Loan Feasibility study examines the feasibility of several non-structural and structural alternatives considered by URS and sets forth the Recommended Alternative. That study establishes the technical, financial, environmental, and institutional feasibility of rehabilitating the siphon and canal system.**
  - **Two recently completed studies by URS Corporation (which are referred to here as the Conveyance System Studies) contain the design and engineering recommendations for this Project, as follows:**

- The technical specifications for the Santa Maria Siphon Support System Stabilization Project and the Santa Maria Canal Improvements Project, are included with this proposal in Exhibit B. Additional data is available from SMRC including engineering drawings, additional specifications, and maps.
- Based on the results of URS field surveys and engineering and design analyses, the two Conveyance System Studies set forth the Scope of Work and construction requirements to stabilize the siphon support system and to upgrade the canal of the conveyance system. They describe alternative approaches considered by URS to resolving problems identified in the siphon and canal and set forth URS' Recommended Alternative in each case. The Recommended Alternative for each element are as follows:

**Siphon Preferred Alternative : Rehabilitating and reinforcing the existing supports in place.** *"This alternative will repair the existing supports with reinforced concrete in place. This alternative will include selective demolition of the thrust blocks and intermediate supports and then using reinforcement overlays for the blocks and supports to reestablish their structural integrity. The steel bearing plates that support the siphon pipe on the intermediate supports will be [re]placed with new plates. This alternative was selected as the preferred alternative based on technical and cost merits. The pipe has been in place since [...] 1934. It was decided that the replacement of an existing support system would last the same time period with minimal risk of failure."*

**Canal Preferred Alternative: Improve the flow hydraulics through canal improvements.** *"This alternative includes removing the existing drop structures and [improving and adding to]the concrete lining [of] the canal to improve the flow hydraulics so the canal [will have the capacity] to convey additional flow. A hydraulic model was used to evaluate the appropriate cross section for the canal. It was decided that it was important to remain within the same footprint of the existing canal to minimize the potential of extensive environmental and special use permitting issues. This alternative was selected as the preferred alternative based on technical and cost merits."*

- In 2011 URS Corporation performed a topographic survey as well as preliminary and final hydraulic and structural design analyses for the siphon and the canal projects, and the results of these were used to develop the designs of the project components of this Project.
- The Continental Reservoir Studies have been finalized by URS Corporation and have been reviewed by the State Engineer's Office (SEO), with approval expected prior to CWCB contract.
- The engineering and design work of URS to complete this Project, along with the CWCB grant/loan strategy, were unanimously approved by SMRC stockholders at their annual meeting on December 4, 2012. With the SMRC Board and Stockholders committed to this



**Project, this proposal seeks the required grant funds to proceed with implementation. SMRC is working with URS to develop the bid documents prior to soliciting bids.**

**Background Studies**

- **In 2011, with WSRA funds, URS Corporation performed a hydrologic study of Continental Reservoir to determine its required spillway size. This study assessed the hydrologic and hydraulic adequacy of the Continental spillway, according to State's regulations, so as to determine the measures required to lift the current storage restriction.**
- **Completed in 2012, URS Corporation also performed an analysis and identified the shortcomings of the entire SMRC reservoir storage and water delivery system. This Project and all subsequent studies by URS are the result of that analysis. Future phases of the SMRC Rehab Initiative will be based upon those findings.**
- **Since the beginning of planning in 2007, SMRC has conducted numerous site visits and held many meetings with URS Corporation, stockholders, SMRC's Attorney William Paddock, and also with CWCB's grant and loan program staff. Chairman of the Rio Grande Basin Roundtable, Mike Gibson, has advised the project many times over the years, with assistance from the Rio Grande Basin Roundtable's Technical Assistance Subcommittee.**
- **Site visits included inspections of Continental Dam and Santa Maria Dam to assess dam safety issues, including the Continental spillway and seepage along the left dam abutment at Continental. Further field investigations focused on the conveyance system, consisting of portions of Clear Creek, the pipeline, the siphon, and the open ditch.**
- **URS developed the 24-hour, 100-year precipitation using NOAA Atlas II; and local and general storm probable maximum precipitation (PMP) using EPAT and HMR-55A methods. URS developed the flood hydrology using the United States Army Corp of Engineers (USACE) HEC-HMS computer model, using available project data and routing the floods through the existing spillway to determine if the critical storm event meets SEO Rules. These analyses will inform future phases of the SMRC Rehab Initiative and determine the required spillway configuration and other reservoir and dam requirements at Continental Reservoir.**

**Permitting Issues: Included in Exhibit C are copies of several early special use permits issued in and around 1908, together with correspondence from SMRC's attorney, describing the very minimal extent to which this Project will need additional permits. To address SMRC's concern with regard to the wetland area above Continental, the following preliminary study was conducted:**

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- In November, 2012, SMRC contracted with Charles O. Spielman, consulting geological engineer, to perform a preliminary assessment as to the likelihood that a fen, or fens, might be present in the area immediately upstream of the present Continental Reservoir high water line. Since this is an area that would be flooded by an increase in the maximum allowed capacity of the reservoir, this information would be needed in future phases of the SMRC Rehab Initiative. This study examined the subject area from a geological perspective, briefly reviewed selected literature regarding the definition of a fen, and assessed the geologic, topographic, and moisture conditions relative to the formation of fens. This study concluded that it is very unlikely that a fen, or fens, exist in the subject area. The brief preliminary study is included in its entirety.

### 3. Statement of Work, Detailed Budget, and Project Schedule

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.** All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

**Please provide a detailed statement of work using the template in Exhibit A.** Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

### REPORTING AND FINAL DELIVERABLE

**Reporting:** The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

**Final Deliverable:** At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

### PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to

**Water Supply Reserve Account – Application Form**  
Revised December 2011

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the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

The above statements are true to the best of my knowledge:

**Signature of Applicant:**

**Print Applicant's Name:**

**Project Title:**

**Return an electronic version (hardcopy may also be submitted) of this application to:**

Greg Johnson – WSRA Application  
Colorado Water Conservation Board  
1580 Logan Street, Suite 200  
Denver, CO 80203  
[gregory.johnson@state.co.us](mailto:gregory.johnson@state.co.us)



**Exhibit A**

**Budget**

**Scope of Work**

**Schedule**



## B U D G E T

TASK NO.	TASK DESCRIPTION	ESTIMATED QUANTITY	UNITS	UNIT PRICE	TOTAL PRICE
<b>SUPPORT SYSTEM STABILIZATION</b>					
1	Mobilization, Demobilization & Preparatory work	1	LS	14,500	\$14,500.00
2	Erosion & Sediment Control	1	LS	2,000	\$2,000.00
3	Clearing & Grubbing	1	LS	5,000	\$5,000.00
4	Selective Demolition - Thrust Blocks	1	LS	20,000	\$20,000.00
5	Selective Demolition - Intermediate Supports	1	LS	20,000	\$20,000.00
6	Reinforced Concrete Overlays - Thrust Blocks	13	CY	1,500	\$19,500.00
7	Reinforced Concrete Overlays - Intermediate Blocks	26	CY	1,500	\$39,000.00
8	Fabrication & Installation - Steel Bearing Plates	10	EA	500	\$5,000.00
9	Removal of Loose Rock & Boulders	60	CY	250	\$15,000.00
	<b>CONSTRUCTION SUBTOTAL</b>				\$140,000.00
10	Allowance for Changes After Contract (12%)				\$16,800.00
	<b>CONSTRUCTION TOTAL</b>				\$156,800.00
11	Engineering during construction (10%)				\$15,680.00
	<b>Total Siphon Support costs</b>				<b>\$172,480.00</b>
<b>CANAL IMPROVEMENTS</b>					
12	Mobilization, Demobilization & Preparatory work	1	LS	119,510	\$119,510.00
13	Erosion & Sediment Control	1	LS	10,000	\$10,000.00
14	Dewatering & Diversion	1	LS	10,000	\$10,000.00
15	Clearing & Grubbing	3	AC	6,000	\$18,000.00
16	Stripping & Stockpiling Topsoil	1200	CY	5	\$6,000.00
17	Selective Demolition	1	LS	40,000	\$40,000.00
18	42" Bypass Pipe	2410	LF	120	\$289,200.00
19	Concrete Encasement	1170	CY	350	\$409,500.00
20	Unclassified Excavation	1460	CY	9	\$13,140.00
21	Rock Excavation	170	CY	60	\$10,200.00
22	Fill	200	CY	30	\$6,000.00
23	Concrete Canal Liner	7110	SY	50	\$355,500.00
24	Riprap & Bedding	230	CY	65	\$14,950.00
25	Concrete Check Structure	4	CY	800	\$3,200.00
26	Reclamation of Disturbed Areas	1.2	AC	4,000	\$4,800.00
	<b>CONSTRUCTION SUBTOTAL</b>				\$1,310,000.00
27	Allowance for changes after contract (12%)				\$157,200.00
	<b>CONSTRUCTION TOTAL</b>				\$1,467,200.00
28	Engineering during construction (10%)				\$146,720.00
	<b>TOTAL CANAL PROJECT COSTS</b>				<b>\$1,613,920.00</b>
<b>OTHER PROJECT COSTS</b>					
29	Admin. And Legal				\$17,864.00
30	Environmental Permitting				\$50,000.00
	<b>Total Conveyance System Project Costs</b>				<b>\$1,854,264.00</b>
	<b>Total Conveyance System Project Costs(Rounded)</b>				<b>\$1,855,000.00</b>

## **SCOPE OF WORK**

The Scope of Work for this Phase I Project will follow the technical specifications provided by URS Corporation for the Canal Improvement Project and the Support System Stabilization Project. These specifications are included in their entirety in **Exhibit B**. The following Tasks are involved.

<b>SUPPORT SYSTEM STABILIZATION</b>	
<b>Task</b>	
1	Mobilization, Demobilization & Preparatory work
2	Erosion & Sediment Control
3	Clearing & Grubbing
4	Selective Demolition - Thrust Blocks
5	Selective Demolition - Intermediate Supports
6	Reinforced Concrete Overlays - Thrust Blocks
7	Reinforced Concrete Overlays – Intermediate Blocks
8	Fabrication & Installation - Steel Bearing Plates
9	Removal of Loose Rock & Boulders
10	Allowance for Changes After Contract (12%)
11	Engineering during construction (10%)
<b>CANAL IMPROVEMENTS</b>	
12	Mobilization, Demobilization & Preparatory work
13	Erosion & Sediment Control
14	Dewatering & Diversion
15	Clearing & Grubbing
16	Stripping & Stockpiling Topsoil
17	Selective Demolition
18	42" Bypass Pipe
19	Concrete Encasement
20	Unclassified Excavation
21	Rock Excavation
22	Fill
23	Concrete Canal Liner
24	Riprap & Bedding
25	Concrete Check Structure
26	Reclamation of Disturbed Areas
27	Allowance for changes after contract (12%)
28	Engineering during construction (10%)
29	Admin. And Legal
30	Environmental Permitting

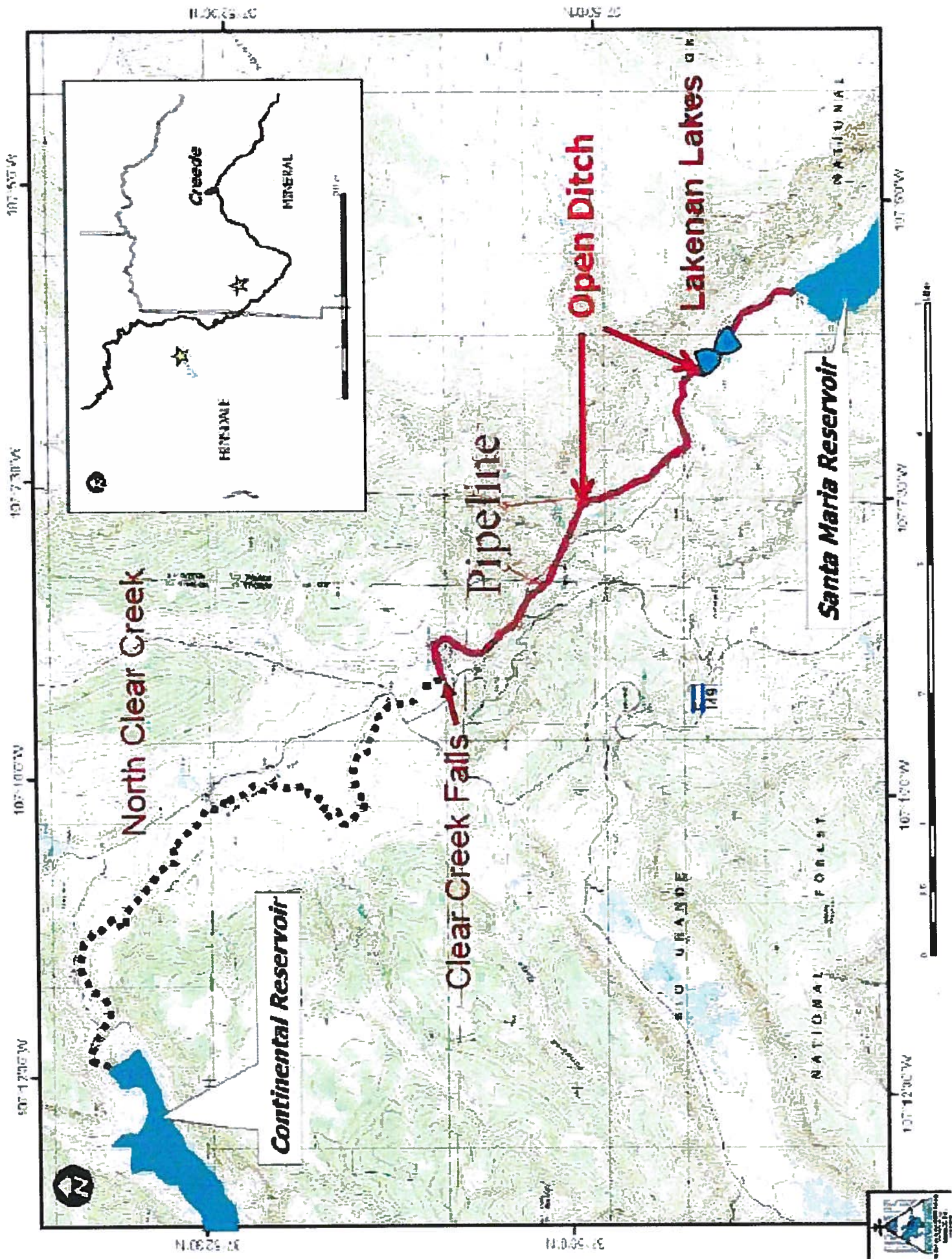


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## SCHEDULE

TASK	TASK			MONTHS - 2013										
NO.	DESCRIPTION	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV				
	BID PROCESS	X	X	X										
	NOTICE TO PROCEED			X										
SUPPORT SYSTEM STABILIZATION														
1	Mobilization, Demobilization & Preparatory work				X									
2	Erosion & Sediment Control				X									
3	Clearning & Grubbing				X									
4	Selective Demolition - Thrust Blocks				X									
5	Selective Demolition - Intermediate Supports				X									
6	Reinforced Concrete Overlays - Thrust Blocks					X	X	X						
7	Reinforced Concrete Overlays - Intermediate Blocks					X	X	X						
8	Fabrication & Installation - Steel Bearing Plates				X	X	X	X						
9	Removal of Loose Rock & Boulders				X	X	X	X						
10	Allowance for Changes After Contract (12%)				X	X	X	X	X	X				
11	Engineering during construction (10%)				X	X	X	X	X	X				
CANAL IMPROVEMENTS														
12	Mobilization, Demobilization & Preparatory work				X	X								
13	Erosion & Sediment Control				X	X	X	X	X	X				
14	Dewatering & Diversion				X	X								
15	Clearning & Grubbing				X	X	X	X	X	X				
16	Stripping & Stockpiling Topsoil				X	X	X	X	X					
17	Selective Demolition				X	X	X							
18	42" Bypass Pipe						X	X	X	X				
19	Concrete Encasement						X	X	X	X				
20	Unclassified Excavation				X	X	X	X	X	X				
21	Rock Excavation				X	X	X	X	X	X				
22	Fill				X	X	X	X	X	X				
23	Concrete Canal Liner						X	X	X	X				
24	Riprap & Bedding							X	X	X				
25	Concrete Check Structure							X	X	X				
26	Reclamation of Disturbed Areas								X	X				
27	Allowance for changes after contract (12%)				X	X	X	X	X	X				
28	Engineering during construction (10%)				X	X	X	X	X	X				
29	Administration & Legal	X	X	X	X	X	X	X	X	X				
30	Enviromental Permitting	X	X	X										
FINAL REPORT												X		









Open Ditch - about one mile long

Lakenan Lakes

Santa Maria Dam

Outlet from Santa Maria to  
Clear Creek

*Conveyance System*







## Rio Grande Water Conservation District

10900 Highway 160 East • Alamosa, Colorado 81101

Phone: (719) 589-6301 • Fax: (719) 589-4331

*Protecting & Conserving San Luis Valley Water*

December 21, 2012

Mike Gibson, Chairman  
Rio Grande Basin Roundtable  
623 4<sup>th</sup> Street  
Alamosa, CO 81101

Re: Support for the Santa Maria Project

Dear Mr. Gibson,

The objective of the Santa Maria Reservoir Siphon & Canal System Rehabilitation Project (this Project) is to improve the capability of SMRC to continue providing irrigation water to shareholders. This will be accomplished by rehabilitating and making critical repairs to the Santa Maria Siphon and the Santa Maria Canal, which constitute the main structural elements of the conveyance system between the Continental Reservoir and the Santa Maria Reservoir. The goals of this Project are to mitigate current water-management inefficiencies, reduce high maintenance, prevent the continued deterioration, and avoid the potential failure of this delivery system.

This Project constitutes the first phase of SMRC's multi-phase Santa Maria Rehabilitation Initiative (referred to here as the SMRC Rehab Initiative), implementing recommendations made in recently completed studies by URS Corporation (URS). This Project and all future phases of the SMRC Rehab Initiative have the ultimate objective of lifting the State-imposed storage limitations at Continental Reservoir and mitigating or eliminating the many problems created by the deterioration of a century-old system which will otherwise soon reach the end of its useful life.

WSRA grant funding for this Project represents 25% of total project cost, with the remaining costs funded through a CWCB Water Projects Loan and matching funds from SMRC. All funds will be used to rehabilitate and reinforce the existing supports of the siphon and to improve the flow hydraulics of the conveyance system by upgrading and improving the canal. The preferred alternative for the canal requires removing the existing drop structures and upgrading the canal's concrete lining, thus enabling the system to convey additional flow once the storage limitation on

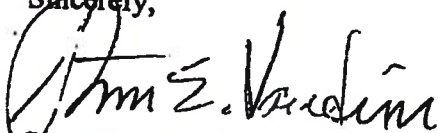
Continental is lifted.

This Project will complete the first phase of the SMRC Rehab Initiative, improving and increasing the capacity of the conveyance system between Continental Reservoir and Santa Maria Reservoir and putting in place the critical elements required to proceed with future improvements at Continental Reservoir. By implementing the preferred alternatives established in the URS Studies, this Project will accomplish multiple consumptive and non-consumptive purposes, greatly improving SMR's ability to (1) meet the agricultural needs of irrigators in 65,000 acres of the San Luis Valley and (2) establishing significant improvements in the efficient management of Colorado's Rio Grande Compact water.

The Board of Directors of the Rio Grande Conservation District supports this project and encourages the Rio Grande Basin Roundtable and the Colorado Water Conservation District to sponsor the project.

If you should need anything further please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve E. Vandiver". The signature is written in a cursive, flowing style.

Steve E. Vandiver  
District Manager

SEV/maa

# THE RIO GRANDE WATER USERS ASSOCIATION

P.O. Box 288  
147 Washington Street  
Monte Vista, Colorado 81144  
Phone: (719) 852-3556 - Fax: (719) 852-5958

January 4, 2013

Mr. Mike Gibson, Chairman  
Rio Grande Basin Roundtable  
623 Fourth Street  
Alamosa, CO 81101

Re: Santa Maria Reservoir Siphon & Canal System Rehabilitation Project

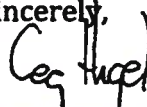
Dear Mike:

I am writing to you on behalf of the Rio Grande Water Users Association to express its strong support for the Santa Maria Reservoir Company's funding request to the Rio Grande Roundtable for the repair and rehabilitation of the delivery pipeline support system, delivery ditch and the related facilities for the diversion and delivery of water for storage in Santa Maria Reservoir. This request is based on a study by URS Corporation of dam safety and operational issues at Santa Maria Reservoir and Continental Reservoir, two large pre-compact reservoirs. The Santa Maria Reservoir Siphon & Canal System Rehabilitation Project is the first phase of a multiphase effort to implement the recommendations of that study to improve the safety, reliability, and usefulness of Santa Maria and Continental Reservoirs.

As you know, the top priorities identified by the Rio Grande Basin Roundtable were to repair the basin's pre-compact reservoirs. The Santa Maria Reservoir Siphon and Canal System Rehabilitation Project is one of these top priorities, and is very important to both the Santa Maria Reservoir Company shareholders and water users on the Rio Grande. This project will protect invaluable pre-compact storage, and will help with water conservation, compact compliance, river administration, pre-compact reservoir operations, and the replacement of stream depletions by wells.

This water supply reserve account funding request represents 25% of the total project cost, with the remaining cost to be funded by a CWCB loan, and funds to be provided by the Santa Maria Reservoir Company. The Rio Grande Water Users Association requests that both the Rio Grande Basin Roundtable and the Colorado Water Conservation Board approve this funding request for this very important project.

Sincerely,

  
Greg Higel, President

Copy: Santa Maria Reservoir Company

# THE MONTE VISTA WATER USERS ASSOCIATION

P.O. Box 288  
147 Washington Street  
Monte Vista, Colorado 81144  
Phone: (719) 852-3556 - Fax: (719) 852-5958

January 4, 2013

Mr. Mike Gibson, Chairman  
Rio Grande Basin Roundtable  
623 Fourth Street  
Alamosa, CO 81101

Re: Santa Maria Reservoir Siphon & Canal System Rehabilitation Project

Dear Mike:

The Monte Vista Canal Water Users Association is writing to express its strong support for the Santa Maria Reservoir Company's funding request to the Rio Grande Roundtable for the repair and rehabilitation of the delivery pipeline support system, delivery ditch and the related facilities for the diversion and delivery of water for storage in Santa Maria Reservoir. Shareholders in the Monte Vista Canal own 10% of the Santa Maria Reservoir Company, and are very committed to the success of this project. This funding request is based on a study by URS Corporation of dam safety and operational issues at Santa Maria Reservoir and Continental Reservoir, two of the three large pre-compact reservoirs on the Rio Grande. The Santa Maria Reservoir Siphon & Canal System Rehabilitation Project is the first phase of a multiphase effort to improve the safety, reliability, and usefulness of Santa Maria and Continental Reservoirs.

As you know, the top priorities identified by the Rio Grande Basin Roundtable were to repair the basin's invaluable pre-compact reservoirs. The Santa Maria Reservoir Siphon and Canal System Rehabilitation Project is one of these top priorities, and is very important to both the Santa Maria Reservoir Company shareholders and to all of the water users on the Rio Grande. The project will help the conservation of water through storage in a pre-compact reservoir, and will help with water management, river operations, compact administration, exchanges between pre-compact reservoirs, and the replacement of stream depletions by wells.

The Monte Vista Water Users Association requests that both the Rio Grande Basin Roundtable and the Colorado Water Conservation Board approve this funding request. Thank you for your consideration on this very important project.

Sincerely,



Mark Haugen, Secretary

Copy: Santa Maria Reservoir Company

# COLORADO



# POTATOES

QUALITY AT ITS PEAK

January 4, 2013

Mike Gibson

Rio Grande Basin Roundtable

Dear Mike Gibson,

I am writing on behalf of the Colorado Potato Administrative Committee to encourage the Rio Grande Roundtable to support the water supply reserve account grant application of the Santa Maria Reservoir Company. This project will upgrade the deteriorating conveyance systems of Continental and Santa Maria Reservoirs. This project is needed to maximize the potential uses of these two critical storage reservoirs in the Rio Grande basin.

This project will eventually allow more water to be stored in Continental reservoir and will allow increased water management efficiency and flexibility for water users within the Rio Grande Basin. The conveyance system from Continental reservoir to Santa Maria reservoir is aging and badly in need of these upgrades. These improvements will increase the total capacity of the ditch and pipeline of the conveyance system when water is available for storage.

These reservoirs supply water to 70,000 acres of irrigated land through the Rio Grande Canal and Monte Vista Canal so this project has the capability to impact many producers within four counties of the San Luis valley. In addition these improvements will increase the flexibility needed to manage this stored water for the DOW and their mission of maintaining favorable wildlife habitat and recreational opportunities, and the needs of San Luis valley water sub-districts to meet depletion water needs.

In our minds this project is crucial for the future of San Luis valley agriculture and we urge you to support it.

Sincerely,

Jim Ehrlich

Executive Director

Colorado Potato Administrative Committee



# THE RIO GRANDE CANAL WATER USERS ASSOCIATION

P.O. Box 288  
147 Washington Street  
Monte Vista, Colorado 81144  
Phone: (719) 852-3556 – Fax: (719) 852-5958

January 4, 2013

Mr. Mike Gibson, Chairman  
Rio Grande Basin Roundtable  
623 Fourth Street  
Alamosa, CO 81101

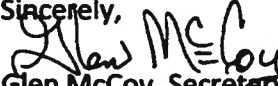
Re: Santa Maria Reservoir Siphon & Canal System Rehabilitation Project

Dear Mike:

The Rio Grande Canal Water Users Association wishes to express its strong support for the Santa Maria Reservoir Company's funding request to the Rio Grande Roundtable for the repair and rehabilitation of the delivery pipeline support system, delivery ditch and the related facilities for the diversion and delivery of water for storage in Santa Maria Reservoir. Shareholders in the Rio Grande Canal own 90% of the Santa Maria Reservoir Company, and are very committed to the success of this project. This funding request arises out of a comprehensive engineering study of dam safety and operational issues at Santa Maria Reservoir and Continental Reservoir, two of the three large pre-compact reservoirs on the Rio Grande. The Santa Maria Reservoir Siphon & Canal System Rehabilitation Project is the first phase of a multiphase effort to improve the safety, reliability, and usefulness of Santa Maria and Continental Reservoirs.

As you know, the top priorities identified by the Rio Grande Basin Roundtable were to repair the basin's invaluable pre-compact reservoirs. The Santa Maria Reservoir Siphon and Canal System Rehabilitation Project is one of these top priorities, and is very important to both the Santa Maria Reservoir Company shareholders and to all of the water users on the Rio Grande. The project will help with the conservation of water through storage in a pre-compact reservoir, and will help with water management, river operations, compact administration, exchanges between pre-compact reservoirs, and the replacement of stream depletions by wells.

The Rio Grande Canal Water Users Association requests that both the Rio Grande Basin Roundtable and the Colorado Water Conservation Board approve this funding request. Thank you for your consideration on this very important project.

Sincerely,  
  
Glen McCoy, Secretary

Copy: Santa Maria Reservoir Company

# **SAN LUIS VALLEY IRRIGATION DISTRICT**

**P. O. Box 637      296 Miles Street  
Center, Colorado 81125-0637**

**719-754-2254**

*January 2, 2013*

**To: Mr. Mike Gibson, Chairman  
Rio Grande Interbasin Roundtable  
623 Fourth Street  
Alamosa, CO 81101**

**Re: Santa Maria Reservoir Siphon & Canal System  
Rehabilitation Project (SMR Project)**

**Dear Mike,**

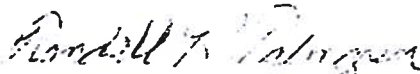
***The San Luis Valley Irrigation District supports the funding request of the Santa Maria Reservoir Company to the Rio Grande Roundtable for the "SMR Project" to repair and rehabilitate the important conveyance system that provides inflows to Santa Maria Reservoir. This request is Phase I of a multiphase effort to implement recommendations made by Santa Maria Reservoir Company's engineers URS Corporation.***

***As you know, URS Corporation recently completed its study of the Santa Maria Reservoir and Continental Reservoir dam safety issues. This water supply reserve account request represents 25% of the total project costs, with the remaining cost to be funded by a CWCB loan, and matching funds to be provided by the Santa Maria Reservoir Company.***

***The top priorities identified by the Rio Grande Roundtable were to repair the basin's 100 year old reservoirs. The Santa Maria Reservoir Siphon and Canal System Rehabilitation Project is very important not only to the Santa Maria Reservoir Stakeholders, but to all of the water users on the Rio Grande for compact compliance, river administration, and reservoir operations between all pre compact reservoirs to meet the growing demand for wet water, including the environmental needs of the basin.***

***The Board of Directors of the San Luis Valley Irrigation District recommends approval of this funding request by the Rio Grande Roundtable and the Colorado Water Conservation Board.***

***Thank you for your consideration on this very important request.***

**Sincerely,** 

**Randall Palmgren  
President, San Luis Valley Irrigation District**



## Rio Grande Water Conservation District

10900 Highway 160 East • Alamosa, Colorado 81101

Phone: (719) 589-6301 • Fax: (719) 589-4331

*Protecting & Conserving San Luis Valley Water*

December 21, 2012

Mike Gibson, Chairman  
Rio Grande Basin Roundtable  
623 4<sup>th</sup> Street  
Alamosa, CO 81101

Re: Support for the Santa Maria Project

Dear Mr. Gibson,

The objective of the Santa Maria Reservoir Siphon & Canal System Rehabilitation Project (this Project) is to improve the capability of SMRC to continue providing irrigation water to shareholders. This will be accomplished by rehabilitating and making critical repairs to the Santa Maria Siphon and the Santa Maria Canal, which constitute the main structural elements of the conveyance system between the Continental Reservoir and the Santa Maria Reservoir. The goals of this Project are to mitigate current water-management inefficiencies, reduce high maintenance, prevent the continued deterioration, and avoid the potential failure of this delivery system.

This Project constitutes the first phase of SMRC's multi-phase Santa Maria Rehabilitation Initiative (referred to here as the SMRC Rehab Initiative), implementing recommendations made in recently completed studies by URS Corporation (URS). This Project and all future phases of the SMRC Rehab Initiative have the ultimate objective of lifting the State-imposed storage limitations at Continental Reservoir and mitigating or eliminating the many problems created by the deterioration of a century-old system which will otherwise soon reach the end of its useful life.

WSRA grant funding for this Project represents 25% of total project cost, with the remaining costs funded through a CWCB Water Projects Loan and matching funds from SMRC. All funds will be used to rehabilitate and reinforce the existing supports of the siphon and to improve the flow hydraulics of the conveyance system by upgrading and improving the canal. The preferred alternative for the canal requires removing the existing drop structures and upgrading the canal's concrete lining, thus enabling the system to convey additional flow once the storage limitation on

Continental is lifted.

This Project will complete the first phase of the SMRC Rehab Initiative, improving and increasing the capacity of the conveyance system between Continental Reservoir and Santa Maria Reservoir and putting in place the critical elements required to proceed with future improvements at Continental Reservoir. By implementing the preferred alternatives established in the URS Studies, this Project will accomplish multiple consumptive and non-consumptive purposes, greatly improving SMR's ability to (1) meet the agricultural needs of irrigators in 65,000 acres of the San Luis Valley and (2) establishing significant improvements in the efficient management of Colorado's Rio Grande Compact water.

The Board of Managers of the Special Subdistrict No. 1 of the Rio Grande Water Conservation District support this project and encourages the Rio Grande Basin Roundtable and the Colorado Water Conservation District to sponsor the project.

If you should need anything further please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert Phillips".

Robert Phillips  
Program Manager

RP/maa

